device/systems are communicating through the internet, at a pre-determined time, for example, at 11:59 p.m., or at pre-determined/pre-programmed intervals, the communications **10596** connect to the internet and the system connects to the cloud **10598**. The data is uploaded/moved to the cloud. The one or more external managers **10600** may download the data to a server and/or a computer device, and the data is therefore backed up both by the cloud **10598** and the one or more external managers **10600**.

[1050] Each time the data is updated, the most up-to-date data and/or state is uploaded into the live/most recent state and the old state is moved to a history. At the end of an interval, for example, 24 hours, of device/system run, the at least one external manager **10600** may review the data and determine if changes are needed, etc. In various embodiments, only changes in state/data are logged. However, in some embodiments, for sensors, valves, etc., that may be constantly changing; the system may log the data at a pre-determined/pre-programmed interval, e.g., every 5 minutes. Logging only the changes or logging data in intervals may be beneficial for many reasons, including, but not limited to, transferring and/or logging less data overall which is more efficient.

[1051] In various embodiments, the at least one external manager, either **10606** or **10600**, may set the state for the systems/devices.

[1052] In various embodiments, for example, the embodiment shown in FIG. **137**, the at least one systems/devices **10594** may connect/communicate **10596** with the cloud **10598** at pre-programmed intervals, e.g., every 2 hours. This is beneficial for many reasons, including, but not limited to, the systems/devices **10594** at all times which may decrease the opportunity for hacking into the systems/devices **10594**, and/or compromising the systems/devices **10594**. If one or more of the at least one external managers **10600** desires to connect to one or more systems/device **10594** at a given time that is outside when the at least one systems/device **10594** are connected to the cloud **10598**, the at least one external manager **10600** may shoulder tap the cloud **10598** and communicate to the cloud **10598** that the at least one external manager **10600** wants to communicate with one or more systems/devices **10594**. The cloud **10598** may send a text message to the at least one or more systems/device **10594** that tells the at least one or more systems/devices **10594** to connect to the cloud **10598**. This configuration may be beneficial for many reasons, including, but not limited to, conserving bandwidth as the at least one external managers **10600** do not have of stay connected to the cloud **10598** or the at least one systems/devices **10594** all the time, rather, only when it is necessary.

[1053] This network communications configuration may be used for remotely controlling and/or remotely monitoring the one or more systems/devices **10594**. Additionally, This network communications configuration may be used for downloading, remotely, software updates and/or reconfiguring one or more systems/devices **10594**.

[1054] In addition, the following is incorporated herein by reference in its entirety: U.S. patent application Ser. No. 10/713,617 filed Nov. 13, 2003, Publication No. US-2005-0016828 published Jan. 27, 2005, now U.S. Pat. No. 7,597,784 issued Oct. 6, 2009 and entitled Pressurized Vapor Cycle Liquid Distillation (Attorney Docket No. D91).

[1055] While the principles of the invention have been described herein, it is to be understood by those skilled in the art that this description is made only by way of example and not as a limitation as to the scope of the invention. Other embodiments are contemplated within the scope of the present invention in addition to the exemplary embodiments shown and described herein. Modifications and substitutions by one of ordinary skill in the art are considered to be within the scope of the present invention.

1-20. (canceled)

21. A fluid vapor distillation apparatus comprising:

a source water input;

a product water output;

a compressor receiving water vapor and producing compressed vapor;

an evaporator condenser apparatus comprising;

an evaporator that receives source water, the evaporator transforms source water to water vapor and concentrate liquid;

a steam chest that receives concentrate liquid and water vapor and provides water vapor to the compressor; and

a condenser that receives compressed vapor from the compressor, the condenser transforming the compressed vapor to product water;

a heat exchanger comprising:

an outer tube fluidly connected to the source water input and the evaporator;

at least one inner tube fluidly connected to the evaporator condenser apparatus; and

a first end and a second end; and

a first connector is attached to the first end and a second connector attached to the second end, each of the first and second connectors comprising:

a first portion physically connected to the outer tube, the first portion having a first port fluidly connected to the inside of the outer tube and a seal to the outer surface of the at least one inner tube;

a second portion having a second port fluidly connected to the inside of the at least one inner tube port and a seal to the outer surface of the at least one inner tube; and

a fluid path between the first portion and the second portion to the outside of the heat exchanger whereby fluid leaking past the first portion seal or the second portion seal may exit the heat exchanger.

22. The fluid vapor distillation apparatus of claim **21**, wherein the first port of the first end is fluidly connected to the source water inlet and first port of the second end is fluidly connected to the evaporator.

23. The fluid vapor distillation apparatus of claim **21**, wherein the second port of the second end is fluidly connected to the condenser and the second port of the first end is fluidly connected to the product water output, whereby the product water heats the source water.

24. The fluid vapor distillation apparatus of claim **23**, wherein the heat exchanger comprises 3 inner tubes.

25. The fluid vapor distillation apparatus of claim **21**, wherein the second port of the second end is fluidly connected to the steam chest and the second port of the first end is fluidly connected to a drain, whereby the concentrate fluid heats the source water.

26. The fluid vapor distillation apparatus of claim **21**, wherein the heat exchanger is wrapped in a spiral around the evaporator condenser apparatus.